BORISOV, M.; ZUBKOV, P.; KOSTINA, L.; YEFIMOVA, R.; VITCHUK, Boleslav

Builders are introducing new methods. Stroitel' no.12:8-9 D '59. (MIRA 13:3)

1. Predsedatel' TSentral'nogo komiteta profsoyuza rabochikh stroitel'stva i promyshlennosti stroitel'nykh materialov (for Borisov). 2. Nachal'nik otdela truda i zarabotnoy platy Ufimskogo tresta No.3 (for Zubkov). 3. Korrespondent gazety "Znamya stroitelya" (for Yefimova). 4. Brigadir armaturshchikov na zavode shelezobetonnykh isdeliy Ryazanskogo tresta No.23 (for Vitchuk).

(Building)

KOSTINA, K.G.

[Growing plums] Kul'tura slivy. Simferopol', Krymizdat, 1951. 106 p. (MIRA 14:10)
(Plum)

KOSTINA, L.D.

Determining right ascensions of circumpolar stars of the FK3 system. Izv.GAO 21 no.2:94-116 '58. (MIRA 13:4)
(Stars--Catalogs)

KOSTINA, L. D.: Master Phys-Math Sci (diss) -- "The determination of the right ascensions of FK3 stars closer to Polaris". Leningrad, 1959. 11 pp (Acad Sci USSR, Main Astronomical Observatory), 150 copies (KL, No 15, 1959, 113)

KOSTINA, L. I.

PHASE I BOOK EXPLOITATION SOV/5742

Akademiya nauk SSSR. Mezhduvedomstvennyy komitet po provedeniyu Mezhdunarodnogo geofizicheskogo goda. VIII razdel programmy MGG: Shiroty i dolgoty.

Predvaritel'nyye rezul'taty issledovaniy kolebaniy shirot i dvizheniya polyusov zemli; sbornik statey (Preliminary Data of Latitude Variations and Migrations of the Earth's Poles; Collected Articles. No. 1) Moscow, Izd-vo AN SSSR, 1960. 97 p. Errata slip inserted. 1,000 copies printed.

PURPOSE: This collection of articles is intended for astronomers, geophysicists, and other scientists concerned with the problem of latitude variations and the migration of the Earth's poles.

COVERAGE: Part I of the collection contains preliminary results of latitude observations from 1957.5 through 1959.0 made at IGY stations in the USSR network, including new stations in Siberia. Part II consists of articles describing new instruments, observational programs and methods, and procedures of processing the latitude observational data. With the larger number of stations and the use of new instruments it is anticipated that the final results will provide a more comprehensive study of anomalies and instrumental

Card 1/5

errors in latitude observations than has been possible previously. No personalities are mentioned. English abstracts and references follow each article.

TABLE OF CONTENTS:

PART TWO

S/035/62/000/008/009/090
A001/A101

AUTHOR: Kostina, L. D.

TITLE: The observational program with a zenith telescope at Ulan-Bator

PERIOCICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 8, 1962, 17 - 18, abstract 8A142 (In collection: "Predvarit. rezul'taty issled. kolebaniy shirot i dvizheniya polyusovZemli, no. 2", Moscow, AN SSSR, 1961, 65 - 78, English summary)

TEXT: A latitude program has been elaborated at Pulkovo for the Ulan-Bator Latitude Station equipped with a Zeiss zenith telescope (D=135 mm, F=175 cm, field of view 25'). The program consists of 85 Talcott pairs divided into 12 two-hour groups with centers at even hours by α. The time of program operation is planned to be 50 years, and therefore the condition $\sum \Delta z=0$ holds most precisely about epoch 1986. At the beginning and the end of the program (1961 and 2011) the average values of half-differences of zenith distances in groups amount to $\pm$ 8!4. The program compiled is particularly advantageous for studying the secular motion of the pole, since its period of operation is considerably larger than usual ones, and the supposed secular displacement of the pole proceeds almost exactly along

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S/035/62/000/008/009/090
A001/A101

The observational program with a zenith telescope at... ✓

the Ulan-Bator meridian. In addition to the basic program, a program of bright stars has been worked out, as well as the program of 285 scale pairs. Requirements to be satisfied by the stars of all the programs are listed, and detailed data on them are presented. There are 6 references.

Kh. Potter

[Abstracter's note: Complete translation]

Card 2/2

KOSTINA, L. I.

Kostina, L. I. "The morphology of the epithelium of the uterus, both normal and under conditions of hyperplasia", Trudy Akad. med. nauk SSSR, Vol. I, 1949, p. 243-49, Bibliog: 5 items.

SO: U-411, 17 July 1953, (Letopis 'Zhurnal 'nykh Statey, No. 20, 1949)

KOSTINA, L.I

KOSTINA, L.I.

Gastric glomangioblastoma. Trudy AMN SSSR 21 no.4:16-21 '52.
(MLRA 10:8)

1. Iz patologoanatomicheskogo otdeleniya (zav. - chlen-korrespondent Akademii meditsinskikh nauk SSSR prof. M.F.Glazunov) Instituta onkologii Akademii meditsinskikh nauk SSSR (dir. - chlen-korrespondent Akademii meditsinskikh nauk SSSR prof. A.I.Serebrov)

(STOMACH, neoplasms,
glomangioma)
(GLOMANGIOMA,
stomach)

U

COUNTRY : USSR
CATEGORY : General Problems of Pathology. Tumors. Comparative Oncology
ABS. JOUR. : RZBiol., No. 12 1958, No. 56436
AUTHOR : Lyubavina, I.I., Kostina, L.I.
INST. : -
TITLE : The Problem of Malignant Degeneration of Benign Tumors of the Nasal Cavity

ORIG. PUB. : Collection: Vopr. onkologii, Sb.6. Moscow-Leningrad, Medgiz, 1957, 120-126

ABSTRACT : On the basis of an analysis of the history of 144 patients with tumors of the nasal cavity, the authors believe that highly-differentiated "benign" tumors of the nose including angioma, papilloma, adenoma, epithelioma, and others, situated on the lateral wall, are subject as a rule to malignant degeneration, which may involve both the parenchyma and the stroma of the tumor. Tumors acquire an ever greater degree of malignancy with every recurrence. Hence, all tumors of the lateral wall of the nasal cavity should be treated regardless of the degree of their differentiation.

CARD: 1/1

BUKHMAN, M.P.; KOSTINA, L.I.

Investigating the pigments of tumor cells with the ultraviolet microscope. Biofizika 1 no.4:387-389 '56. (MIRA 9:9)

1. Institut onkologii AMN SSSR, Leningrad.
(MELANINS) (HEMOSIDERIN) (HEMOGLOBIN)
(FLUORESCENCE MICROSCOPY)

KOSTINA, L.I.

Materials on the histogenesis of Brenner's tumor; foci and microtumors of the Brenner type. Vop.onk. 6 no.1:39-46 '60. (MIRA 13:10)

(TUMORS)

BOKHMAN, Ya.V.; KOSTINA, L.I.

Endometriosis of the pelvic lymph nodes. Vop. onk. 11 no.2: 3-10 '65. (MIRA 18:7)

1. Iz ginekologicheskogo (zav. - prof. V.P. Tobilevich) i patologoanatomicheskogo otdeleniya (zav. - doktor med. nauk S.F. Serov; nauchnyy konsul'tant - deystvitel'nyy chlen AMN SSSR prof. M.F. Glazunov) Instituta onkologii AMN SSSR (direktor - deystvitel'nyy chlen AMN SSSR prof. A.I. Serebrov).

KOSTINA, L.V.; NAZAROVA, G.N.; PLAKSIN, I.N.; SOLNYSHKIN, V.I.

Chemical mechanism of the controlling action of sodium hexafluorosilicate on the flotation of some minerals. Dokl. AN SSSR 161 no.6: 1382-1384 Ap '65. (MIRA 18:5)

1. Institut gornogo dela im. A.A.Skochinskogo. 2. Chlen-korrespondent AN SSSR (for Plaksin).

N-6

Country : USSR
CATEGORY :

ABS. JOUR. : RZBiol., No. 19 1958, No. 87116

AUTHOR : Yorting, I. ...
INST. : Chkalov Scientific Research Institute of ...
TITLE : Tillering and New-Growth Formation of Sudan-grass Depending on Mowing Conditions

ORIG. PUB. : Tr. Chkalovsk n.-i. in-t molochno-myasn. skotovodstva, 1956, No 10, 141-156

ABSTRACT : The 1950-1953 experiments showed that sudan-grass, under the conditions of the Southeast, can make new growth and tiller during the entire grazing period, which is particularly important at the time of temporary arrest of growth of natural range grasses. Application of fertilizers and irrigation make it possible to increase by 45-/CL the number of bearing new shoots and secure high yields of seed. In using sudangrass on the range the best period of utilization is that of tillering and sheath formation, with grazing to a height of 4-5 cm. During this phase the yield of green crop is of about 60 centners/hectare. At the time of full development of the sheath it is best to allow grazing to a height of 1-5 cm. as a supplementary

CARD: 1/3

* Dairy and Meat Cattle Breeding.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220008-4

N-6

CATEGORY :

ABS. JOUR. : RZBiol., No. 19, 1958, No. 87116

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : green forage it is best to utilize sudan-grass during the period of full development of the sheath, before the tassel is formed, and to mow it to a height of 4-5 cm (yield 76-78 centners/hectare). During flowering the mowing should be as close to the ground as possible. When used for green feed and hay, mowing should be carried out not too frequently, 2-3 times per season. To ensure development of large number of new growth shoots in the aftermath the principal harvesting should be mowed close to the ground. Sudangrass pastures can be grazed, for best results, 4-5 times per season. Sudangrass contains the maximum amounts of protein (18.77%), fats (3.45%), calcium

CARD: 2/3

16(1)
AUTHORS: Melentsov,A.A., and Kostina,M.A.

06314
SOV/140-59-6-15/29

TITLE: On the Theory of Gronwall-Transformations

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Matematika, 1959, Nr 6, pp 111-117 (USSR)

ABSTRACT: Let the transformation of Gronwall be defined by the functions

$$f(w) = \sum_{n=1}^{\infty} a_n w^n,\ a_1 \neq 0, \text{ and } g(w) = \sum_{n=0}^{\infty} b_n w^n,\ b_n \neq 0.$$

If

(3) $$F(w) = \sum_{n=1}^{\infty} \delta_n w^n,\ \delta_1 \neq 0 \text{ and } [F(w)]^n = \sum_{k=n}^{\infty} \gamma_k^{(n)} w^k$$

(in the sense of Cauchy), then the transformation defined by the lower triangular matrix [Ref 2]

(4) $$\|\varphi_n(m) - \varphi_{n+1}(m)\|$$

is analytic if $\varphi_n(m) = \sum_{k=n}^{m} \delta_k^{(n)}$ and $\varphi_n(m) = 0$ for $n > m$.

Theorem 1: Every analytic transformation belongs to the class of Gronwall-transformations.
Theorem 2: In order that a Gronwall-transformation (f,g) is analytic, it is necessary and sufficient that

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On the Theory of Gronwall-Transformations

(5) $g(w) = \frac{\gamma}{\alpha w+\beta}$, $\alpha\beta\gamma \neq 0$;

while the image function f(w) remains arbitrarily. Let a sequence of complex numbers $\{p_n\}$ satisfy the condition $p_0+p_1+\ldots+p_n=P_n\neq 0$ for all n. The transformation defined by the lower triangular matrix $\left\| \frac{p_{m-n}}{p_m} \right\|$ is called a Voronoy-transformation.

Theorem 3: Every Voronoy-transformation is contained in the class of Gronwall-transformations.
Theorem 4: In order that a Gronwall-transformation (f,g) is a Voronoy-transformation, it is necessary and sufficient that $f(w) = \alpha w$ and $\alpha \neq 0$.
Theorem 5: The product of the transformation class of Voronoy with the analytic class is identical with the class of Gronwall-transformations.
Theorem 6: The intersection of the transformation class of Gronwall with the class of bounded Hausdorff-transformations

KOSTINA, M.I.

KONDRAT'YEV, Ye.V.; KOSTINA, M.I.

Reproducing the process of peat formation under artificial conditions. Soob.o nauch.rab.chl.VKHO no.1:26-31 '55. (MIRA 10:10)
(Peat)

CA KOSTINA, M. I.

A method of analysis of plant materials. K. V. Kondrat'ev and M. I. Kostina (Moscow Med. Inst.). *Zhur. Prikład. Khim.* (*J. Applied Chem.*) 24, 870–8(1951).—Hydrolysis of plant matter with *N* HCl does not remove all the pentosans and even fails to remove uronic acids. Lignin residues sepd. by concd. mineral acids contain undecompd. pentosans and uronic acids, whose presence accounts for 1 more CO_2H group in lignin. The polyuronide complex, from oxidation of cellulose, is some 80% undecompd. by concd. H_2SO_4 under conditions of sepn. of lignin with cleavage of CO_2 (*cf. C.A.* 46, 6821b). Methylation of lignin, before and after extn., shows the participation of hemicelluloses in the formation of a lignin residue during hydrolysis with *N* HCl. The isolation of lignin by alk. extn. is also connected with hydrolysis of the carbohydrate complex; this places the natural character of the isolated product in doubt. While 0.5 *N* NaOH exts. from *Eriophorum vaginatum* a product very similar to lignin but devoid of MeO groups, most of it remains insol. in the alk. soln.

G. M. Kosolapoff

AID P - 3748

Subject : USSR/Chemistry

Card 1/1 Pub. 152 - 12/22

Authors : Kondrat'yev, Ye. V. and M. I. Kostina

Title : Disintegration of organic matter in plant material under artificial conditions

Periodical : Zhur. prikl. khim. 28, 9, 982-988, 1955

Abstract : Formation of peat under experimental conditions resembling natural conditions has been studied by observing the transformation of various plants, (bushes, grass, and moss). Three tables, 2 diagrams, 3 references, all Russian (1934-1953).

Institution : Department of General Chemistry of the Moscow Steel Institute im. I. V. Stalin

Submitted : D 15, 1953

NATANSON, S.V.; KOSTINA, M.M.

Effect of the composition of the microcrystals of silver halide emulsions on the characteristics of the spectral sensitivity of photographic materials. Trudy NIKFI no.40:50-61 '60.(MIRA 15:2)
(Photographic emulsions)(Photographic sensitometry)

Z/011/62/019/006/003/003
E073/E135

AUTHORS: Natanson, S.V., and Kostina, M.M.

TITLE: Influence of bromine ions on the optical sensitizing of halogen-silver sensitized layers

PERIODICAL: Chemie a chemická technologie; Přehled technické a hospodářské literatury, v.19, no.6, 1962, 292. Abstract Ch 62-3994 (Zh. nauchnoy i prikladnoy, Fotografii i kinematografii, v.6, no.5, 1961, 588-590)

TEXT: Brief report on a study of the phenomenon that the sensitivity of silver bromide emulsions can be increased by sufficient rinsing with water prior to explosion [Abstractor's note: sensibilization] . The authors prove that the increase in sensitivity is due to a drop in the concentration of bromide ions in the emulsion.
1 figure, 3 tables, 1 reference.

[Abstractor's note: Complete translation.]

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S/081/62/000/011/011/057
E111/E152

AUTHORS: Natanson, S.V., and Kostina, M.M.

TITLE: Influence of bromine ions on the optical sensitization of silver-halide photographic layers

PERIODICAL: Referativnyy zhurnal, Khimiya, no.11, 1962, 68, abstract 11 B 427. (Zh. nauchn. i prikl. fotogr. i kinematogr., v.6, no.5, 1961, 388-390).

TEXT: It has been found that on raising the pBr of layers sensitized with derivatives of thiacarbo-thiatricarbo- and oxacarbo-cyanine dyes, as a result of washing in water the sensitivity S rises, but does not change on immersion in KBr solutions having no effect on the pBr of the layer. Washing of the emulsion before or after sensitization to the same values of pBr leads to the same values of S. The influence of changes in the concentration of Br^- ions on S is reversible, with the exception of cases when the change in S is accompanied by any secondary processes: increase in fog or partial decomposition of the dye. Considerable changes in

Card 1/2

the pBr of the layer, producing large fluctuations in S, do not produce changes in the absorption spectrum. The conclusion has been drawn that Br^- ions retard the transfer of energy from the dye to AgBr.

[Abstractor's note: Complete translation.]

Card 2/2

NATANSON, S.V.; KOSTINA, M.M.

Effect of bromine ions on the optical sensitization of silver halide photographic layers. Zhur.nauch.i prikl.fot. i kin. 6 no.5:388-390 S-O '61. (MIRA 14:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy kinofotoinsitut (NIKFI).
(Photographic emulsions)

S/081/62/000/022/007/088
B177/B186

AUTHORS: Natanson, S. V., Kostina, M. M.

TITLE: The effect of the composition of microcrystals of silver-halide emulsions on the character of the spectral sensitivity of photographic materials

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 22, 1962, 58, abstract 22B395 (Tr. Vses. n.-i. kinofotoin-ta, no. 40, 1960, 50-61)

TEXT: Absorption spectra (AS) were investigated of ammoniacal AgHal emulsions (E) having a solid phase of different compositions: AgCl, AgCl·AgBr, AgBr, AgBr·3% AgI, AgBr·30% AgI, sensitized by carbocyanines of varying structure. E was synthesized both by sedimentation of the solid phase after the first maturing stage, and by flushing. The carbocyanines (CC) were introduced into E after the 2nd maturing stage, before pouring into alcohol solutions of different concentrations. The different lots of E were centrifuged and the CC content and the form of the AS were determined in the gelatine solutions thus obtained. The AS of colored microcrystals of AgHal was determined by subtracting the AS of the gelatine

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solution from that of the emulsion layer. The composition of the solid phase has a marked effect on the character of the adsorption layer of CC, in that the more liable a given CC is to the formation of several H- or I-states of a high degree of aggregation, the more apparent is the effect of the composition of the AgHal. As a rule, during adsorption on AgHal, the quantity of CC in the aggregated state increases in a number of the solid phase compositions referred to above; aggregation is least favoured by AgCl, and favored most by AgBr·AgI. Gelatine affects the character of an adsorbed CC layer more strongly, the weaker the reaction of CC is with the adsorbent, in particular inversely as the ability of the adsorbent to produce highly-aggregated forms of CC. On the other hand, the presence of halogen ions in the liquid phase of E promotes an increase in strength of the highly-aggregated states, in the order $Cl < Br < I$. Since the I-states are the most active photo-chemically, the CC's which are inclined to produce I-aggregates are employed to best advantage in E's in which this tendency increases as a result of adsorption. It is desirable to use such CC's in the form of iodides, or to perform sensitization in the presence of Br^- or I^- ions. [Abstracter's note: Complete translation.]

Card 2/2

KOSTINA, N.

Our experience in training specialists for collective farm construction work. Sel'.stroi.11 no.2:10 F '56. (MLRA 9:7)

1.Starshiy ekonomist Rostovskogo oblastnogo upravleniya po stroitel'-stvu v kolkhozakh.
(Building trades--Study and teaching)

KOSTINA, N.

27-5-16/25

AUTHOR: Kostina, N., Director of the Special Trade School # 7 (Riga)

TITLE: Competition - the Foundation of Success (Sorevnovaniye - osnova uspekhov)

PERIODICAL: Professional'no - Tekhnicheskoye Obrazovaniye, May 1957, #5(144), pp 27-28 (USSR)

ABSTRACT: The article tells of the growth of school productivity resulting from the various forms of socialist competition. In the school year 1955/56, the Special Trade School # 7 in Riga (Latvian Soviet Republic) has manufactured articles for an amount exceeding 900,000 rubles. The competition, organized by the foremen of practical teaching and discussed in the Trade Union and Komsomol Committees, is carried out between separate groups of the particular school, and between single students (in regard to the rate of output) as well as with other schools. At the beginning of the school year, at the first school meeting, a resolution to participate in the competition during the coming year is passed. The competition applies to the rate of output, the behaviour of the students, their discipline, quality of work, the good appearance of the class rooms, the workshops

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27-5-16/25

TITLE: Competition - the Foundation of Success (Sorevnovaniye - osnova uspekhov)

etc. The Komsomol carries out unexpected inspections in the workshops, class-rooms and boarding houses and the results are severely criticized in the school newspaper. The best group is awarded the challenge red banner.

INSTITUTION: None

PRESENTED BY:

SUBMITTED:

AVAILABLE: At the Library of Congress

Card 2/2

STUPISHIN, A.V., prof.; BABANOV, Yu.V., ml. nauchn. sotr.; GUSEVA, A.A., ml. nauchn. sotr.; DUGLAV, V.A., dots.; ZAKHAROV, A.S., dots.; KOSTINA, N.M., assistent; LAVROV, D.D., dots.; LAPTEVA, N.N., assistent; ROMANOV, D.F., ml. nauchn. sotr.; SIROTKINA, M.M., aspirant; SMIRNOVA, T.A., ml. nauchn. sotr.; TORSUYEV, N.P., st. prepod.; TAYSIN, A.S., st. prepod.; TROFIMOV, A.M., assistent; KHARITONYCHEV, A.T., prepod.; STUPISHIN, A.V., red.; KHABIBULLOV, R.K., red.

[Establishing physicogeographical regions in the middle Volga Valley] Fiziko-geograficheskoe raionirovanie Srednego Povolz'ia. Kazan', Izd-vo Kazanskogo univ., 1964. 196 p. (MIRA 18:12)

24095

S/186/60/002/006/020/026
A051/A129

26.2541

AUTHORS: Bagretsov, V. F.; Nikolayev, V. M.; Zolotavin, V. L.; Kostina, N.P.; Skorova, L. V.

TITLE: The sorption of microquantities of strontium and cesium on biotite

PERIODICAL: Radiokhimiya, v. 2, no. 6, 1960 734 - 738

TEXT: In a study of the sorption processes of strontium-90 and cesium--134 microquantities on biotite in the presence of macroquantities of alkali-earth metal and magnesium ions, the exchange equivalent and the applicability of the law of acting masses to the investigated system was established. The authors point out that the quantitative laws of ion exchange are expressed through the exchange isotherm. In deriving an equation for the ion exchange isotherm the activity coefficient of the microcomponent ion must be taken into consideration. The distribution coefficient concept (Ref. 12: S. Yu. Yelovich, ZhOKh, 3, 144, 660, 1933) is used. In case of sorption exchange of the microquantities of the element on the sorbent saturated by the macrocomponent, the ratio of the activity coefficients in the solid phase is a constant value, since the composition

Card 1/3

S/186/60/002/006/020/026
A051/A129

The sorption of microquantities of .....

of the solid solution changes very little, although the ionic strength of the solution can change here. Thus, the exchange constants are calculated for the investigated systems by determining B_0 from experimental data. Biotite of the following composition was used in the experiments: SiO_2-35.74, Al_2O_3-13.92, Fe_2O_3-5.83, FeO-19.67, MnO-1.48, TiO_2-3.89, BaO-0.18, CaO-0.74, MgO-5.93, $K_2O + Rb_2O + Cs_2O$ - 4.03, Na_2O - 3.38. The activity coefficient of the ions were taken from literature data (Ref. 13: M. Kh. Karapet'yants, Khimicheskaya termodinamika. (Chemical thermodynamics). Goskhimizdat, M.-L., 1953). The given isotherms of distribution show that the experimental results coincide favorably with the calculations, i. e., the interaction of cesium^{134} and strontium^{90} with biotite follows the law of acting masses. The value of G was found to be $1.013 \cdot 10^{-5}$ mole Me^{2+} to 1 gram of sorbent. An anomalous bond strength was noted between the cesium ions and the sorbent. Finally, the following series of cation replacement on the biotite was derived from the calculated values of the exchange constants: $Cs^+ > Ba^{2+} > Sr^{2+} > Ca^{2+} > Mg^{2+}$. There are 2 tables, 2 figures and 16 references: 8 Soviet-bloc and 8 non-Soviet-bloc. The references to the four most recent English language publications read as follows: A. P. Vanselow, J. Am.

Card 2/3

KOSTINA, N.T., inzh.

Program control of machine tools. Mekh. i avtom. proizv. 19 no. 10:47-48 O '65. (MIRA 18:12)

AGRINSKIY, K.M., inzh.; BEDAREVA, O.P.; KOSTINA, M.V.

Calculation of high pressure systems with the use of a computer.
Trudy VNIIGidrouglia no.3:50-53 '63 (MIRA 18:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy i proyektno-konstruktorskiy institut dobychi uglya gidravlicheskim sposobom.

SOV/79-29-2-65/71

AUTHORS: Fedotova, O. Ya., Losev, I. P., Askarov, M. A., Kostina, R. G.

TITLE: Polycondensation of Some N,N'-Dialkyl-substituted Derivatives of 4,4'-Diamino-3,3'-Dimethyldiphenyl Methane With Adipinic Acid (Polikondensatsiya nekotorykh N,N'-dialkilzameshchennykh proizvodnykh 4,4'-diamino-3,3'-dimetildifenilmetana s adipinovoy kislotoy)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 2, pp 672-676 (USSR)

ABSTRACT: The authors earlier described the synthesis of polyamides, which they had obtained by polycondensation of 4,4'-diamino-3,3'-dimethyldiphenyl methane and its N,N'-diethyl-substituted derivative with adipinic acid. Reactions are dealt with here, taking place according to the same scheme, with the exception that the diamines used possess larger substituents at the nitrogen (R=C_3H_7, C_4H_9, C_5H_{11}, C_6H_{13} and C_8H_{17}). The polycondensation of propyl and butyl-substituted diamines with adipinic acid yielded two products, namely, poly-N,N'-dipropyl-3,3'-dimethyldiphenyl methane adipine amide and poly-N,N'-dibutyl-3,3'-dimethyldiphenyl methane adipine amide. These are

Polycondensation of Some N,N'-Dialkyl-substituted Derivatives of 4,4'-Diamino-3,3'-Dimethyldiphenyl Methane With Adipinic Acid

glass-like products, easily soluble in organic solvents; the former melts at 57° and the latter at 55°. Their molecular weights are between 4500 and 5200. The condensation of N,N'-dipropyl-4,4'-diamino-3,3'-dimethyldiphenyl methane with adipinic acid at 160° was found to lead chiefly to the monomer amide, while the other likewise yields the monomer and, in a smaller quantity, a dimer. Polyamides having the highest polycondensation degree (10-12) and the lowest amine and acid numbers formed at the optimum reaction temperature (260°). Moreover, also N,N'-diisoamyl-N,N'-dihexyl and N,N'-dioctyl-substituted diamine was caused to react in the same way (Table 1). A comparison was made of the properties of the polycondensation products; these properties depend on the amount of the substituent radical at the nitrogen atom, as well as on the disappearance of the hydrogen bonds. There are 6 figures and 2 tables.

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskiy institut imeni D. I. Mendeleyeva (Moscow Chemico-technological Institute imeni D. I. Mendeleyev)

SOV/79-29-2-65/71

Polycondensation of Some N,N'-Dialkyl-substituted Derivatives of 4,4'-Diamino-3,3'-Dimethyldiphenyl Methane With Adipinic Acid

SUBMITTED: December 28, 1958

Card 3/3

ACCESSION NR: AP4030787 S/0020/64/155/004/0874/0875

AUTHOR: Turov, B. S.; Vinogradov, P. A.; Dolgoplosk, B. A. (Corresponding member); Kostina, S. I.; Kastorskiy, L. P.

TITLE: Effect of electron donor additives on the microstructure of the chain by stereospecific polymerization of butadiene in the presence of "cobaltic" catalytic systems.

SOURCE: AN SSSR. Doklady*, v. 155, no. 4, 1964, 874-875

TOPIC TAGS: butadiene, polymerization, polybutadiene, electron donor additive, chain microstructure, cobaltic catalyst system, stereospecific polymerization, dialkylsulfide, simple ether, tertiary amine, cobalt chloride ethanol complex, diisobutylaluminum chloride, polymerization rate, molecular weight

ABSTRACT: The effect of dialkylsulfides, simple ethers and tertiary amines on the microstructure of the chain formed by polymerizing butadiene in a catalytic system consisting of the $CoCl_2$-C_2H_5OH complex and diisobutylaluminum chloride dissolved in a hydrocarbon was investigated. Experiments were run in benzene at 30C using 0.01 wt.% (based on monomer) of the $CoCl_2$-catalyst. Microstructure

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ACCESSION NR: AP4030787

was determined quantitatively from IR spectra at 912 and 966 cm^{-1}. Introduction of dialkylsulfides into the polymerization system changes the structure of the polybutadiene: the 1,4-cis units decrease as the 1,2-units increase, while the amount of 1,4-trans linkages remains constant. Simple ethers and tertiary amines have a similar effect on the microstructure of the polybutadiene. All these additives in even small amounts (above 0.1 mol/mol of diisobutylaluminum chloride) rapidly decrease the rate of polymerization. The electron donors lower the molecular weight of the polymers. Thus, there is agreement between the change in the chain microstructure and the molecular weight of the polymer. Orig. art. has: 2 figures.

ASSOCIATION: None

SUBMITTED: 19Nov63 DATE ACQ: 30Apr64 ENCL: 00

SUB CODE: OC NO REF SOV: 006 OTHER: 004

Card 2/2

TUROV, B.S.; VINOGRADOV, P.A.; DOLGOPLOSK, B.A.; KOSTINA, S.I.

Effect of electron-donor additions on the chain structure in the stereospecific polymerization of butadiene. Dokl. AN SSSR 151 no.5:1118-1119 Ag '63. (MIRA 16:9)

1. Yaroslavskiy zavod sinteticheskogo kauchuka. 2. Chlen-korrespondent AN SSSR (for Dolgoplosk).
(Butadiene) (Polymerization) (Stereochemistry)

S. I. KOSTINA

Distr: 4E2c(j)

15

An accelerated method for the determination of swelling of synthetic rubber vulcanizates. S. I. Kostina. *Kauchuk i Rezina* 16, No. 12, 30-1(1957).—The swelling of synthetic rubbers (SKN) in a mixt. of gasoline 75 and benzene 25% can be detd. in about 75 min. instead of the usual 24 hrs. by placing a weighed sample and 30 ml. of the solvent mixt. in a hermetically sealed bronze container, and immersing the container in a boiling water bath for 60-75 min. The % swelling is calcd. from the formula $x = (A - B)\ 100/B$, where B is the wt. of the swollen sample, A its initial wt. Detns. of swelling of 3 SKN rubbers gave results comparable with those obtained by the standard method. I. Sor.

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1

SOV/138-58-10-2/10

AUTHORS: Vinogradov, P. A; Paskhalis, T. K; Kostina, S. I.

TITLE: Properties of 1,3-Butadiene-Nitrile Copolymers (Svoystva divinilnitril'nykh sopolimerov)

PERIODICAL: Kauchuk i Rezina, 1958, Nr 10, pp 5 - 10 (USSR)

ABSTRACT: These copolymers show increased stability to aliphatic hydrocarbons and mineral oils. The stability of the vulcanisates increases with increasing number of acrylonitrile rings in the polymer molecule. The polymerisation is carried out in an aqueous solution. The authors investigated the properties of butadiene acrylonitrile copolymers which depend on the degree of conversion of the monomer (Table 3). Characteristics and properties of the starting materials are given. The 1,3-butadiene and acrylonitrile were emulsified at 30°C, in an autoclave, in a ratio varying from 90:5% to 30:70% of 1,3-butadiene:acrylonitrile. From the graph in Fig.1 it can be seen that the rate of the polymerisation reaction increases with increasing acrylonitrile content in the polymerised mixture. The basic properties of the polymers and vulcanisates correspond to the requirements in GOST 7738 - 55. The properties of the polymers and vulcanisates (at 70% polymerisation) are shown in Table 1

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and Figs. 2 and 3. Changes in the physico-mechanical properties of the vulcanisates in copolymers not containing fillers are tabulated (Table 4). The composition of the copolymers depends on the composition of the starting mixture (Fig.4). These 1,3-butadiene acrylonitrile rubbers are used in the preparation of SKN)18, SKN-26 and SKN-40 rubbers. Changes in the properties of the copolymers depending on the depth of conversion of the monomers are discussed (Fig.5). There are 3 Tables, 5 Figures and 5 References: 4 Soviet and 1 English.

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S/138/60/000/009/001/012
A051/A029

AUTHORS: Paskhalis, T.K.; Sivov, V.A.; Rodionov, S.Ye.; Kostina, S.I.; Kasatkina, Ye.I.

TITLE: The Production of soft Butadiene-Nitrile Rubbers

PERIODICAL: Kauchuk i Rezina, 1960, No. 9 pp. 1 - 4

TEXT: The authors conducted a study of the conditions for producing soft butadiene-nitrile rubbers of standard composition, such as the СКН-18 (SKN-18), СКН-26 (SKN-26) and СКН-40 (SKN-40) types, both in the laboratory and under industrial conditions. These soft rubbers obtained during the polymerization process would eliminate the costly mastication in the rubber plants, which requires an excess expenditure of energy, steam and equipment. The experiments were conducted in 60-and 10-liter capacity autoclaves with mixing devices. A detailed description of the procedure is given. The ГОСТ7738-55 (GOST 7738-55) industrial testing method of the quality of synthetic rubbers and latexes was used (Ref. 4). Diproxide (0.35 weight parts) was used as the polymerization regulator and triethanolamine (0.1 weight parts) as the activator. The effect of diproxide feeding into the polymerizing system was investigated. Rubbers obtained with a single feeding of

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The Production of Soft Butadiene-Nitrile Rubbers

diproxide into the system before the beginning of the reaction are less soluble in acetone and the properties of their vulcanizates are lower than those of rubbers obtained by feeding diproxide in three batches. A rubber with homogeneous hardness, completely soluble in acetone, at a polymerization depth of from 5% to 80% is obtained when diproxide is fed into the system hourly in a uniform way. It was found that a rubber of any hardness index could be produced by regulating the diproxide dosage. Figure 1 shows the effect of the diproxide dosage on the rate of polymerization for the three types of rubbers studied, and Figure 2 indicates the effect of the dosage on the hardness of the rubber, according to Defoe. It is pointed out that the rate of polymerization decreases by about 10% in the production of soft rubbers. By increasing the quantity of triethanolamine in the composition to 0.05 weight parts the polymerization rate could be maintained constant. Vulcanizates from soft SKN-40 and SKN-26 rubbers corresponded to the GOST standards if the rubber was separated from the latex by rinsing for a period of 10-15 min, and those of SKN-18 rubber by rinsing for 15-20 min. A drop of physico-mechanical properties was noted if this degree of rinsing exceeded the optimim value. By conducting experiments under industrial conditions it was noted that the hardness of the rubbers decreases with an increase in the amount of diproxide used in the polymerization system, and the polymerization process itself is slowed up. This

S/138/60/000/009/001/012
A051/A027

The Production of Soft Butadiene-Nitrile Rubbers

is especially evident for SKN-40 rubber, where the consumption of triethanolamine is only 0.0075 weight part based on the hydrocarbons. The strip of soft rubber obtained from experimental SKN-40 and SKN-26 was found to be thinner than the standard one and to have less tenacity (especially for rubbers with a hardness of only 900 g), therefore causing cracks in the surface after drying. The drying unit's productivity drops by 10 - 12% in producing soft rubbers with a hardness of 900 - 1200 g, and in producing rubbers with a hardness of less than 900 g it drops by 25 - 30%. The soft SKN-40 and SKN-26 vulcanizates comply with the standards of the GOST as to their cracking resistance, specific and residual elongation. It is noted, however, that the cracking resistance is lower by an average of 15 kg/cm^2 in vulcanizates from soft rubbers than those from standard mass-produced rubbers. Other disadvantage noted in the soft rubbers were the difficulty of packing, transportation and storage. They tend to adhere to the drying rods. Vulcanizates obtained from standard soft SKN-40 and SKN-26 mixes are actually equivalent to those obtained from vulcanizates based on mass-produced rubbers. Experiments and tests were carried out at the NIIRP, the "Kauchuk" Plant and the Yaroslavl' Plant for Rubber Articles. There are 5 tables, 2 graphs and 7 Soviet references.

ASSOCIATION: Yaroslavskiy zavod sinteticheskogo kauchuka (Yaroslavl' Plant of Synthetic Rubber)

TURNOV, B.S.; VINOGRADOV, P.A.; DOLGOPLOSK, B.A.; KHRANINA, Ye.N.; KOSTINA, S.I.

Effect of ethers on the chain structure in the stereospecific polymerization of butadiene. Dokl. AN SSSR 146 no.5:1141-1142 O '62.
(MIRA 15:10)

1. Yaroslavskiy zavod sinteticheskogo kauchuka. 2. Chlen-korrespondent AN SSSR (for Dolgoplosk).
(Ethers) (Butadiene) (Polymerization)

L 15461-63 EPR/EWP(j)/EPF(c)/EWT(m)/BDS AFFTC/ASD Ps-4/Pc-4/Pr-4
RM/WW

ACCESSION NR: AP3005443 S/0020/63/151/005/1118/1119

AUTHORS: Turov, B. S.; Vinogradov, P. A.; Dolgoplosk, B. A. (Corr. Member AS, SSSR); Kostina, S. I.

TITLE: Influence of electron donor additives on the chain structure in stereospecific polymerization of butadiene

SOURCE: AN SSSR. Doklady, v. 151, no. 5, 1963, 1118-1119

TOPIC TAGS: electron donor, butadiene polymerization, stereospecific polymerization, cis-polybutadiene, trans-polybutadiene

ABSTRACT: The effect of thio-ethers and tertiary amines (dibutyl sulfide and triethylamine) on butadiene polymerization was studied as a continuation of earlier study by the authors (DAN, 146, 1141 (1962)) of the effect of straight ethers. These compounds had less effect on polymerization rate than the straight ethers. They did effect an increase in the amount of 1,4-trans isomer by decreasing the 1,4-cis-polybutadiene. There was no lowering of solubility or unsaturation in the polymer formed. Experiment shows the cis-polybutadiene does not

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L 15461-63
ACCESSION NR: AP3005443 2

undergo changes in presence of donor additives and components of the catalyst system TiI_4 + $(iso\text{-}C_4H_9)_3Al$. Trans-members are formed only in the polymerization process by the direct participation of complexes containing the electron-donor additives. Orig. art. has: 1 figure.

ASSOCIATION: Yarovslavskiy zavod sinteticheskogo kauchuka (Yaroslav synthetic rubber plant)

SUBMITTED: 07May63 DATE ACQ: 06Sep63 ENCL: 00

SUB CODE: MA, CH NO REF SOV: 003 OTHER: 003

Card 2/2

MOSHCHINSKAYA, N.K.; BUDINSKAYA, N.N.; Prinimali uchastiye: KOSTINA, S.K., student; KOSTYLEVA, I.P., student

Diarylmethanes and their derivatives. Part 9: Synthesis of homologs of dibenzylbenzenes, phenylnapthylmethanes, and dinaphthylmethanes. Ukr.khim.zhur. 27 no.3:361-365 '61. (MIRA 14:11)

1. Dnepropetrovskiy khimiko-tekhnologicheskiy institut im. F.E.Dzerzhinskogo.

(Benzene)
(Methane)

MERONOV, V.A.; KOSTINA, S.N.; YELIZAROVA, A.N.

Substituted cyclopentadienes and related compounds. Report No. 12: Equilibrium mixture of 1,2- and 2,3-dimethylcyclopentadienes. Izv. AN SSSR, Ser.khim. no. 5:876-882 My '64 (MIRA 17:6)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.

MIRONOV, V.A.; KOPTINA, S.N.; SOBOLEV, Ye.V.; ELIZAROVA, A.N.

Substituted cyclopentadienes and related compounds.
Izv. AN.SSSR.Ser.khim. no. 5:864-875 My '64. (MIRA 17:6)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR
i Komissiya po spektroskopii AN SSSR.

KOSTINA, T.A.

Parasite fauna of the sea bass (Spicara smaris (L.)) of the Black Sea. Trudy SBS 14:274-285 '61. (MIRA 15:4)
(Black Sea--Parasites) (Parasites--Sea bass)

ZVEREV, M.P.; BYCHKOV, R.A.; KOSTINA, T.F.; KLIMENKOV, V.S.

Modification of the properties of polypropylene fibers. Khim. volok. no.3:15-19 '64. (MIRA 17:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo volokna.

677.494.742.2.004.12

AUTHOR: Zverev, M. P.; Kostina, T. F.; Polovikhina, L. A.

TITLE: Strengthening of fibers made from crystalline polypropylene

SOURCE: Khimicheskiye volokna, no. 4, 1965, 2-6

TOPIC TAGS: polypropylene plastic, material deformation, synthetic fiber, crystalline polymer

ABSTRACT: The article presents experimental data on the effect which temperature and drawing rate have on the process of drawing fibers from crystalline polypropylene and on the properties of the strengthened fiber. The drawing process was studied with the use of a special device which made it possible to determine with great accuracy the relationships between stress in the fiber, temperature, elongation factor, and drawing rate. The data showed that in order to obtain a fiber with a high degree of orientation, the drawing should be done near the melting point of the polymer when the drawing rates are high. The physical and mechanical properties of fibers oriented at various temperatures and deformation rates were measured. It is

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L 63786-65
ACCESSION NR: AP5019628

concluded that the process of drawing of fiber from polypropylene involves not only a reorientation of the molecular structure in the direction of the applied stresses, but also a change in this structure. The stresses arising in an infinite polypropylene thread during drawing decrease with rising temperature and falling drawing rate, while the elongation factor increases. This decrease in stresses makes it possible to obtain a polymer having a high density and cross-sectional strength because of improvement of the intermolecular orientation in the direction of the applied stresses. Orig. art. has: 6 figures and 3 tables.

ASSOCIATION: VNIIV

SUBMITTED: 03Sep64 ENCL: 00 SUB CODE: MM, IE

NO REF SOV: 005 OTHER: 002

Card 2/2

S/190/60/002/011/005/027
B004/B060

AUTHORS: Zverev, M. P., Klimenkov, V. S., Kostina, T. F.

TITLE: Dependence of the Thermomechanical Properties of Polypropylene on Its Structural Composition. II

PERIODICAL: Vysokomolekulyarnyye soyedineniya, 1960, Vol. 2, No. 11, pp. 1620 - 1624

TEXT: The authors dealt with the problem of the interaction between atactic and isotactic macromolecules of polypropylene. In the article under consideration, they report on the effect of fractional composition on strength relative prolongation, and modulus of elasticity of polypropylene at 30°C. Specimens prepared by Etlis and Minsker, with a molecular weight of 120,000, were used for the tests. The atactic fraction was either extracted by means of ether or by means of heptane. A three-dimensional copolymer was obtained in the latter case, whose molecules were found to consist of atactic and isotactic links. The production of fibers of different fractional compositions has already been described by the authors in Ref. 3. Fibers elongated by 300% at 30 - 100°C were

investigated here; they consisted 1) of isotactic polypropylene, 2) of 93% isotactic and 7% atactic polypropylene, 3) of 93% isotactic polypropylene and 7% three-dimensional copolymer. The authors reached the following conclusions: 1) Due to recrystallization and orientation, the fiber stability increases with the temperature at which the fibers were elongated. 2) The modulus of elasticity shows a maximum of fibers elongated between 100° and 110°C. The different values of the modulus of elasticity at different polypropylene compositions are explained by the fact that on stretching there occurs, besides re-crystallization, also a translation of crystals without appreciable deformation, so that the atactic structures in-between have an elasticizing effect. The modulus of elasticity of fibers stretched at 100°C was examined between -40° and +120°C, and it was found that a) in the range -40° to -20°C, viz. in the vitrified state, the modulus of elasticity is not dependent on the fractional composition; b) on the transition to the high-elastic state, the modulus of elasticity varies in dependence on the fractional composition, the fibers with atactic fraction exhibiting greater changes. Crystallinity can be estimated on the basis of these effects on the

ACCESSION NR: AP4039348 S/0183/64/000/003/0015/0019

AUTHOR: Zverev, M. P.; By*chkov, R. A.; Kostina, T. F.; Klimenkov, V. S.

TITLE: Modification of polypropylene fiber properties.

SOURCE: Khimicheskiye volokna, no. 3, 1964, 15-19

TOPIC TAGS: polypropylene fiber, polypropylene polystyrene fiber, polypropylene polystyrene compatibility, IR spectra, deformation, mechanical strength, polymer amorphisation, structure breakdown, relative elongation, isotactic polypropylene, isotactic polystyrene, steric hindrance, structure mobility

ABSTRACT: The compatibility and properties of fibers made of mixtures of polypropylene and polystyrene were investigated. The densities of the polymer mixtures and the contraction were determined. IR spectra were critically examined and thermomechanical properties (deformation, strength) were determined. Increasing the amount of polystyrene in polypropylene caused partial amorphization of the polymers. The two polymers are not microcompatible, as shown by IR data and the presence of 2 melting regions in mixtures containing over 12 weight% polystyrene. The positive value of the amount of contraction is not a criteria for determining

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ACCESSION NR: AP4039348

microcompatibility. It is proposed that the geometric dimensions of the macromolecules of the initial polymers and the different dimensions of the secondary structures affect the amount of specific volume contraction. The formation of defects in the secondary structure of polystyrene is greater than in polypropylene; a small amount of the latter in polystyrene causes contraction of the polystyrene. Addition of small amounts of polystyrene caused the polypropylene structure to break down. Increasing the amount of polystyrene in polypropylene reduced the relative elongation and the mechanical strength of the latter due to the microheterogeneity of the system and the increased hardness of the polypropylene structure. Mixtures of isotactic polypropylene and polystyrene have satisfactory physical-mechanical properties if the amount of polystyrene does not exceed 12%. The energy of activation of creep increased with increase in polystyrene content; this was explained by steric hindrances created by the polystyrene which impede the mobility of the polypropylene structure. "In conclusion we consider it our obligation to thank K. S. Minsker for supplying us the isotactic polystyrene." Orig. art. has: 7 figures and 2 tables.

ASSOCIATION: None

Card 2/3

ACCESSION NR: AP4039348

SUBMITTED: 11Apr63 ENCL: 00

SUB CODE: OC NO REF SOV: 008 OTHER: 003

Card 3/3

ARISTOV, L.I.; KOSTINA, T.I.

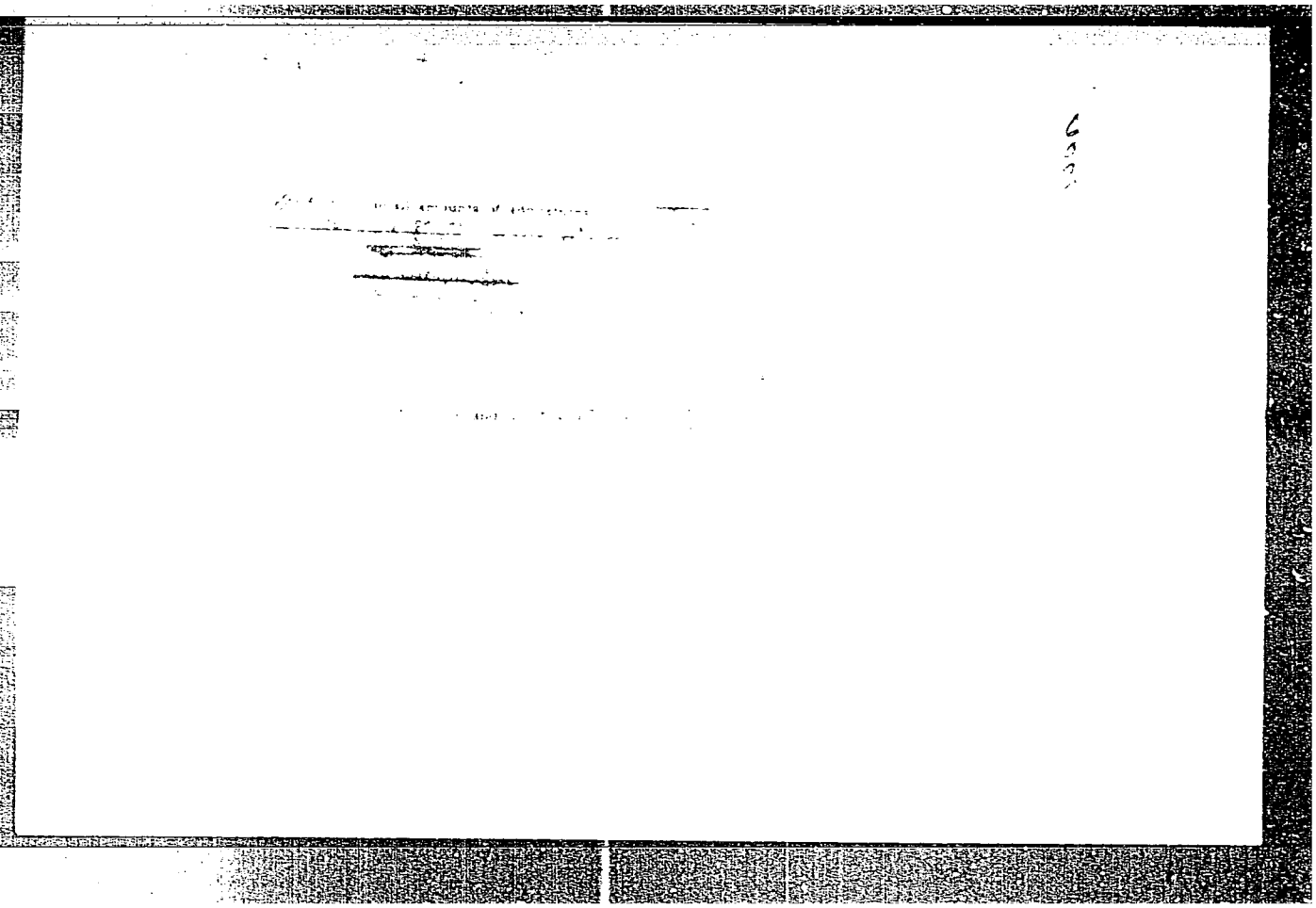
5-Bromo-8-hydroxyquinoline. Zhur. ob. khim. 34 no.10:3421-3422 O '64. (MIRA 17:11)

1. Tomskiy politekhnicheskiy institut imeni S.M. Kirova.

KOSTINA, T. I., FRIDT, N. B., and [illegible]

"Superconductivity of Binary Alloys of Bismuth," Izvestiia Akademii Nauk SSSR, Seriia Fizicheskaia, 1952, Vol. 16, No. 3, pp 233-263.

"Ten alloys of nonsuperconducting Bi with a nonsuperconducting element (BiLi, BiNa, Bi_2K, Bi_3Ca, BiNi, Bi_3Ca, Bi_3Ni, BiRh, Bi_4Rh, Bi_4Rh, Bi_2Pd) showed supercond. at 1.73-4.25°K. The supercon. was ded. by measurements of resistance, magnetic momentum, current decay in a closed loop, and self induction with a. c. current. BiLi was prepd. from Li, purified from Na and K by partical distn. in vacuum; the alloy was made in a high-frequency furnace, washed with H_2O and alc. and kept in He atm. The transition into the superconducting state is at 2.4-2.5°K. BiLi is not superconducting. BiNa and Bi_2K are superconducting. Bi_2K_3 has a transition point at 3.6°K., the same as Bi_2K; $BiNa_3$ and BiK_3 are not superconducting down to 1.4°K. Bi_2Mg_3, prepd. in an Al_2O_3 crucible did not show supercond. Bi_3Ca, prepd. in an Armco-Fe crucible and annealed 120 hrs. at 430° has a crit. temp. of 2.01°K.; Bi_2Ca_3 was not superconducting to 1.30°K. Bi_3Ni annealed at 406° had a crit. temp of 4.06°K."



KOSTINA, T. I., BRANDT, N. B., and ALSKSEYEVSKIY, N. Ye., (Moscow)

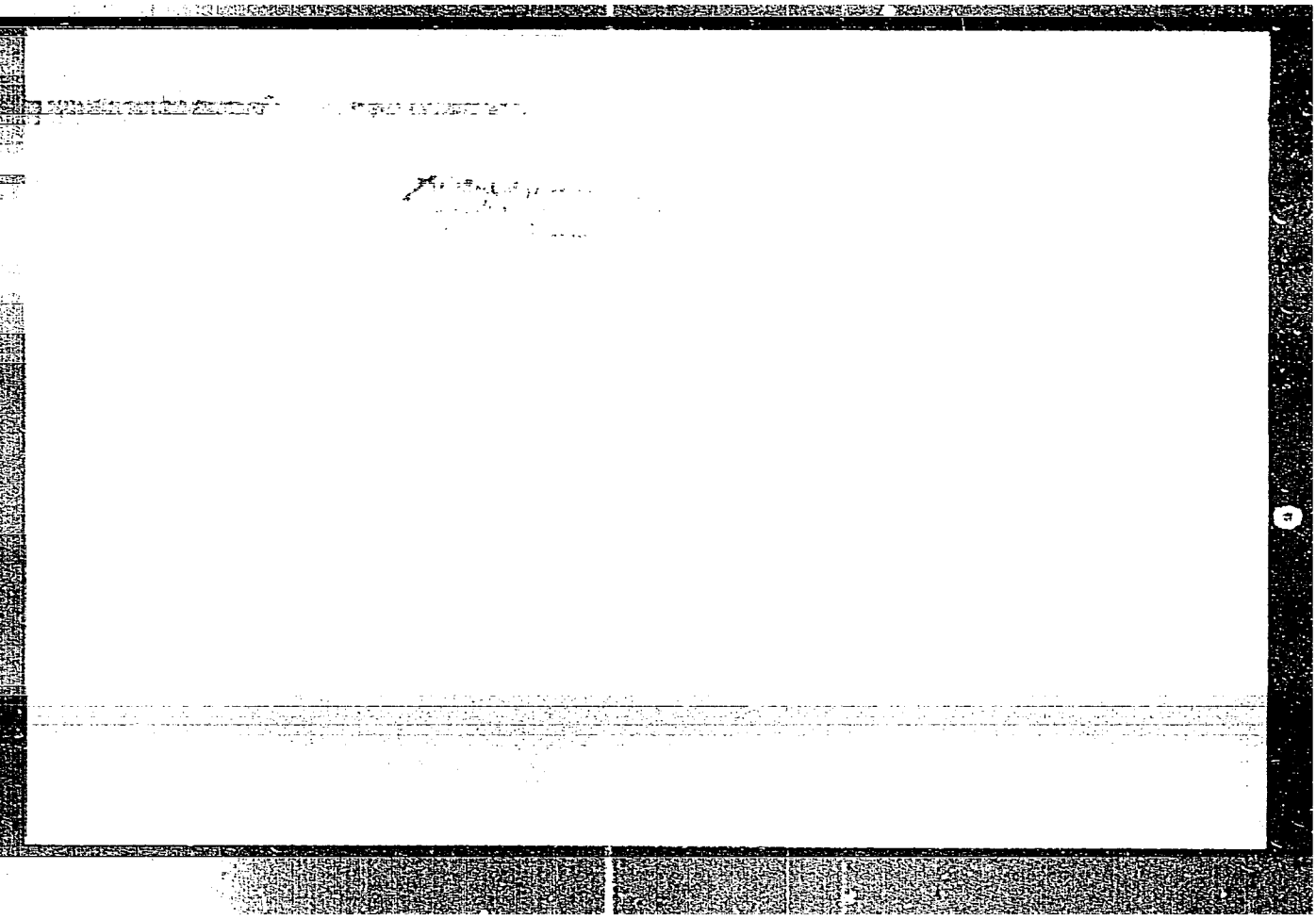
"Galvanomagnetic Properties of Bismut," a paper submitted at the International Conference on Physics of Magnetic Phenomena, Sverdlovsk, 23-31 May 56.

BRANDT, N. B.

3266 INVESTIGATION OF THE EFFECT OF [illegible] GALVANOMAGNETIC PROPERTIES OF TELLURIUM [illegible] TEMPERATURES N. E. Alekseevskii, N. B. Brandt [illegible]

[illegible] The galvanomagnetic [illegible] have been investigated in tellurium samples of various purity in the temperature intervals [illegible] 4.2, 14-20.4 and 80-78° K and at magnetic fields up to 20 kOe. The existence of a minimum in the electrical resistance [illegible] at helium temperatures has been confirmed [illegible] magnitude of the minimum is a function [illegible] impurities and increases on uniform [illegible] The [illegible] minimum is ascribed to Zeeman [illegible] of the impurity [illegible]

Inst. Phys. Problems, AS USSR and Moscow State U.



APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220008-4"

SUBJECT: USSR/Physics of Magnetic Phenomena 48-6-2/23

AUTHOR: Alekseyevskiy, N.Ye., Brandt, N.B. and Kostina, T.I.

TITLE: Effect of Pressure on Galvanomagnetic Properties of Bismuth (Vliyaniye davleniya na gal'vanomagnitnyye svoystva vismuta)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, 1957, Vol. 21, # 6, pp 790-795 (USSR)

ABSTRACT: The effect of an all-sided compression on the temperature-dependence of electric resistance and galvanomagnetic properties of bismuth was investigated.

Galvanomagnetic phenomena were studied on monocrystalline bismuth samples of various purity. Main admixtures in bismuth samples were Pb, Sn, Te and Se whose concentration varied from 0.03 to 0.0005 %, and by raising room temperature to that of helium, changed their electric resistance, and their resistance in a field of 19,000 oersteds at T = 4,2 ^{o} K changed by more than 10^{6} times.

The following conclusions were drawn from the experiments performed:

Card 1/3

24(3)

AUTHORS: Alekseyevskiy, N.Ye., Brandt, N.B. and Kostina, T.I.

SOV/55-58-5-12/34

TITLE: Investigation of the "Quadratic" Hall-Effect for Bismuth, Tin and Aluminum for low Temperatures (Issledovaniye "kvadratichnogo" effekta Kholla u vismuta, olova i alyuminiya pri nizkikh temperaturakh)

PERIODICAL: Vestnik Moskovskogo universiteta, Seriya matematiki, mekhaniki, astronomii, fiziki, khimii, 1958, Nr 5, pp 73 - 78 (USSR)

ABSTRACT: The quadratic Hall-effect for Ge measured by Goldberg [Ref 1] was measured by the authors for Al, Sn and Bi in the temperature interval from 293° to 4.2° K in different magnetic fields. In order to determine the influence of this effect on galvanomagnetic metal properties for strong effective magnetic fields

$$\left(H \frac{r_{o,293^\circ K}}{r_{o,T}}\right)$$

simultaneously the electronic resistance of the same test pieces was measured in the transverse- and longitudinal field. The test-pieces had been produced according to the method of

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Investigation of the "Quadratic" Hall-Effect for Bismuth, Tin and Aluminum for low Temperatures SOV/55-58-5-12/34

P.L. Kapitsa. The effect was observed on for all test pieces and increased with decreasing temperature and cleanliness of the test piece. The impurities of Te have particularly strong influence on the galvanomagnetic properties of Bi; Sn and Sb have a weaker effect. Several further statements are given. There are 6 figures, 1 table, and 9 references, 5 of which are Soviet, 3 American, and 1 English.

ASSOCIATION: Kafedra fiziki nizkikh temperatur (Chair of Physics of Low Temperatures)

SUBMITTED: April 5, 1958

SOV/56-34-5-51/61

AUTHORS: Alekseyevskiy, N. Ye., Brandt, N. B., Kostina, T. I.

TITLE: On the Anomalous Galvanomagnetic Properties of Metals at Low Temperatures (Ob anomal'nykh gal'vanomagnitnykh svoystvakh metallov pri nizkikh temperaturakh)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1958, Vol. 34, Nr 5, pp. 1339-1341 (USSR)

ABSTRACT: Investigating the galvanomagnetic properties of bismuth in transverse and longitudinal magnesit fields, the authors observed an anomalous change in the potential difference similar to that observed by other authors. According to the results obtained by these authors the difference of the potentials V_x measured on the potential electrodes after the usual increase in weak magnetic fields passed through a minimum, and then decreased to zero. In some cases also the sign changed. The authors made additional experiments in order to investigate the influence of the form and of the manner of connecting the electrodes on the character of the variations of V_x in a magnetic field. It is possible to explain the anomalies which were observed previously by other authors

Card 1/3

On the Anomalous Galvanomagnetic Properties of Metals at Low Temperatures

by the influence of quadratic effects, in particular by a "quadratic Hall effect". This effect consists in the following: In the specimens placed in a magnetic field there is a transverse difference of the potentials V_y in the plane which is determined by the directions of the current and of the magnetic field. The difference of the potentials V_y is a quadratic function of the magnetic field strength and in isotropic specimens it has its maximum values if the angle between current and field is equal to 45^0. If the variation of the resistance in the magnetic field is small (for instance for measurements in a longitudinal field) only a very small component V_y (directed parallel to the specimen) is sufficient to distort in a qualtitative manner the curve of the real variation of the resistance in the magnetic field. An especially strong distortion of the discussed results is observed, if the area of the current contacts is small with respect to the cross-section of the specimen and if the potential electrodes are placed close to the ends of the specimen. Increasing the relation (length of the specimens/diameter of the specimens) did not diminish the anomalous effects, when the position of the potential electrodes was not

Card 2/3

On the Anomalous Galvanomagnetic Properties of Metals at Low Temperatures

changed. It is advantageous to execute the measurement on specimens with electrodes which have the same cross-section as have the specimens. There are 1 figure and 9 references, 3 of which are Soviet.

ASSOCIATION: Institut fizicheskikh problem Akademii nauk SSSR (Institute for Problems on Physics, AS USSR) Moskovskiy gosudarstvennyy universitet (Moscow State University)

SUBMITTED: February 5, 1959

1. Metals--Magnetic properties 2. Metals--Temperature factors

Card 3/3

31766
S/056/61/041/006/005/054
B108/B138

24,7700 (1035, 1043, 1164)

AUTHORS: Alekseyevskiy, N. Ye., Kostina, T. I.

TITLE: Change of carrier concentration in bismuth owing to selenium impurities

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 41, no. 6(12), 1961, 1722-1724

TEXT: Bismuth belongs to the group of metals with a closed Fermi surface. Owing to the small number of free carriers (10^{-5} electrons per atom) impurities exert a strong influence on its magnetic and electric properties. The change in carrier concentration due to impurities is of particular interest. 99.998 % pure bismuth was further purified by zone melting. After recrystallization had been repeated 20-30 times the $r_{300°K}/r_{4.2°K}$ ratio was 260. Radioactive selenium was added to the pure specimens to establish an impurity content of $0.5 \cdot 10^{-4}$ (sample Bi-2) and $3.05 \cdot 10^{-4}$ (sample Bi-3). The trigonal sample crystals were 2-2.5 mm thick and 30 mm long. They were prepared according to P. L. Kapitsa (Proc. Roy.

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Change of carrier concentration...

Soc., A119, 358, 1928). Hall constant tends to a saturation value with increasing magnetic field strength. From measurements of Hall constant it was concluded that one selenium atom changes the electron concentration in bismuth by $3 \cdot 10^{-2} \pm 10$ % electrons per atom. The specimens were prepared at the GIREDMET (State Scientific Research Planning Institute of the Rare Metals Industry) by R. A. Dul'kina. There are 2 figures and 9 references: 5 Soviet and 4 non-Soviet. The two most recent references to English-language publications read as follows: J. K. Galt et al. Phys. Rev., 114, 1396, 1959; G. E. Smith. Phys. Rev., 115, 1561, 1959.

ASSOCIATION: Institut fizicheskikh problem Akademii nauk SSSR (Institute of Physical Problems of the Academy of Sciences USSR)

SUBMITTED: June 10, 1961

Legend to Fig. 1: (a) $\Delta r/r$ versus magnetic field strength; T = 4.2°K, current parallel to trigonal axis, field parallel to binary axis. curve A - pure Bi, curve B - Bi-2. (b) $\Delta r/r$ versus H^2 (abscissa - 10^{-6} H^2, oersted^2) for pure Bi. (1) 10^{-3} H, oersted, (2) 10^{-5} H_{eff}, oersted.

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KOSTINA, T.I.; KOZLOVA, T.N.; KONDORSKIY, Ye.I.

Dependence of the electric and magnetic properties of chromium on the temperature and magnetic field strength. Zhur. eksp. i teor. fiz. 45 no.5:1352-1355 N '63. (MIRA 17:1)

1. Moskovskiy gosudarstvennyy universitet.

L 52970-65 EWT(l)/EWT(m)/EWP(w)/EWA(d)/T/EWP(t)/EWP(b) IJP(c) JD
ACCESSION NR: AP5010525 UR/0056/65/048/004/1209/1211

AUTHOR: Alekseyevskiy, N. Ye.; Kostina, T. I. 22 19

TITLE: Concerning the galvanomagnetic properties of bismuth 18 7 B

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 48, no. 4, 1965, 1209-1211

TOPIC TAGS: bismuth, galvanomagnetic property, Hall constant 24, magnetoresistance, spin splitting, orbital splitting

ABSTRACT: The authors investigated samples of bismuth of different purity and different crystallographic orientations. The measurements were made at 77, 20.4, and 4.2K in fields up to 35 kOe. Typical results are shown in Figs. 1 and 2 of the Enclosure. The results are interpreted from the point of view of taking into account the large spin splitting in bismuth, which leads to a change in the number of carriers with magnetic field. It is shown that the value of the spin splitting can be estimated from the experimental data, and it is found that in the case of a field parallel to the binary axis and perpendicular to the trigonal axis the value of the spin splitting is 18% larger than the value of the orbital splitting, where-

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as for a field perpendicular to these axes the spin splitting coincides with the orbital splitting within 5%. Sharp changes observed in the Hall constant and in the anisotropy can possibly be ascribed to a more isotropic electron dispersion at the bottom of the band. "The authors thank Academician P. L. Kapitsa for interest in the work and M. Ya. Azbel' for acquainting them with an unpublished paper and for a discussion of the results. Orig. art. has: 3 figures.

ASSOCIATION: Institut fizicheskikh problem Akademii nauk SSSR (Institute of Physics Problems, Academy of Sciences SSSR)

SUBMITTED: 28Jan65 ENCL: 02 SUB CODE: SS

NR REF SOV: 006 OTHER: 003

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ENCLOSURE:01

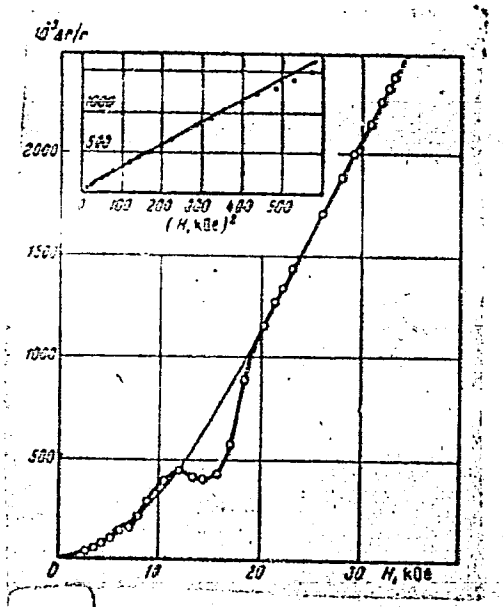

Fig. 1. Dependence of the variation of the electric resistance $\Delta r/r$ on the magnetic field intensity for a bismuth sample at 4.2K, with the field perpendicular to the C_2 and C_3 axes.

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ACCESSION NR: AP5010525

ENCLOSURE: 02

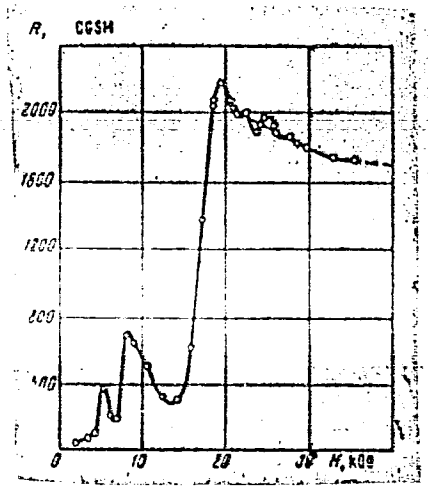

Fig. 2. Dependence of the Hall constant R on the magnetic field intensity for a bismuth sample at 4.2K, with the magnetic field parallel to the C_2 axis and perpendicular to the C_3 axis.

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ZIL'BER, Motel' Kushevich, kand. tekhn. nauk; ROZOVSKIY, Leonid Davidovich, inzh. Prinimali uchastiye: GLADOVSKAYA, T.K., inzh.; KOSTINA, T.M., inzh.; MARCHENKO, A.A., inzh., laureat Leninskoy premii, retsenzent; OSTROUKHOV, M.Ya., kand. tekhn. nauk, red.; SVET, Ye.B., red.

[Slag pumice] Shlakovaia pemza. Cheliabinsk, IUzhno-Ural'skoe knizhnoe izd-vo, 1964. 103 p.
(MIRA 18:7)

VASIL'YEVA, A.I.; GLUMOV, A.I.; KHLONINA, N.P.; KOSTINA, T.N.; ALEKSANDROV, F.T., starshiy nauchnyy sotrudnik, laureat Gosudarstvennoy premii

The new factories should be equipped with high-capacity carding machines. Tekst.prom. 22 no.4:27-29 Ap '62 (MIRA 15:6)

1. Glavnyy inzhener Cheboksarskogo khlopchatobumazhnogo kombinata (for Vasil'yeva). 2.Nachal'nik novostroyashcheysya pryadil'noy fabriki No.3 Cheboksarskogo khlopchatobumazhnogo kombinata (for Glumov). 3.Nachal'nik chesal'nogo tsekha novostroyashcheysya pryadil'noy fabriki No.3 Cheboksarskogo khlopchatobumazhnogo kombinata (for Khlonina). 4.Nachal'nik proizvodstvennoy nauchno-issledovatel'skoy laboratorii Cheboksarskogo khlopchatobumazhnogo kombinata (for Kostina). 5.Vsesoyuznyy nauchno-issledovatel'skiy institut legkogo i tekstil'nogo mashinostroyeniya (VNILTekmash) (for Aleksandrov).

(Carding machines)

GRIGOR'YEVA, M.I., tekhnik; VOLKOVA, A.A.; KOSTINA, T.N.

Observations concerning Sh.K.Kadyrov's article "Methods for determining the strength of machine-harvested cotton." Tekst.prom. 23 no.11: 88-89 N '63. (MIRA 17:1)

1. Cheboksarskiy khlopchatobumazhnyy kombinat. 2. Zamestitel' nachal'nika laboratorii Cheboksarskogo khlopchatobumazhnogo kombinata (for Volkova). 3. Nachal'nik laboratorii Cheboksarskogo khlopchatobumazhnogo kombinata (for Kostina).

[illegible], T. Ye.

"The Effect of Blocking Sympathetic Innervation on the External Secretory Activity of the Pancreatic Gland." Cand Biol Sci, Kazan' State Veterinary Inst, Kazan', 1954. (RZhBiol, No 3, Feb 55)

SO: Sum. No. 631, 26 Aug 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (14)

USSR/Human and Animal Physiology (Normal and Pathological). T-7
Digestion.

Abs Jour : Ref Zhur - Biol., No 11, 1958, 50901

Author : Kostina, T.Ye.

Inst : Kazan' State Institute of Veterinary Sciences.

Title : The Problem of Nerve Regulation of the Extrasecretory Activity of the Pancreas.

Orig Pub : Uch. zap. Kazansk. gos. vet. in-ta, 1956, 64, No 1, 183-189

Abstract : In dogs with a fistula of the pancreas (P) duct and with a fistula of the duodenum (D), P secretion was provoked by injecting a 50 ml 0.2 percent solution of HCl into D through the fistula, or by injecting 4 ml of secretion into the vein. Bilateral novocaine block of the splanchic nerve and of the sympathetic trunks above the pleura according to the method of Mosin, lowered the amount of juice

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KOSTINA, T.Ye.

Role of sympathetic innervation in the humoral phase of pancreatic secretion [with summary in English]. Fiziol.zhur. 44 no.2:159-163 F '58. (MIRA 11:5)

1. Kafedra fiziologii zhivotnykh Veterinarnogo instituta, Kazan'.
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juice secretion, sympath. NS mechanisms (Rus)
(SYMPATHETIC NERVOUS SYSTEM, physiol.
in secretion of pancreatic juice (Rus)

PURKIN, Boris L'vovich; KOSTINA, V., red.

[Bearings manufactured in Saratov] Saratovskie podshipniki. Saratov, Saratovskoe knizhnoe izd-vo, 1963. 37 p.
(MIRA 17:6)

GIL'MAN, Avram Il'ich; KOSTINA, V., red.

[Universal pneumatic lathe chucks] Universal'nye pnevmaticheskie tokarnye patrony. Saratov, Saratovskoe knizhnoe izd-vo, 1963. 111 p. (MIRA 17:7)

KOSTINA, V., red.

[Progressive practices in the heat treatment of machine parts] Peredovoi opyt termicheskoi obrabotki detalei. Saratov, Saratovskoe knizhnoe izd-vo, 1963. 55 p.
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SOSUNOV, V.A.; SHIBAYEV, A.A.; KOSTINA, V., red.

[Superhigh frequency directional couplers] Napravlennye otvetviteli sverkhvysokikh chastot. Saratov, Privolzhskoe knizhnoe izd-vo, 1964. 133 p. (MIRA 18:11)

ZIL'BER, Yakov Kusil'yevich; KOSTINA, V., red.

[Gas case hardening of steel] Gazovaia tsementatsiia stali. Saratov, Saratovskoe knizhnoe izd-vo, 1963. 48 p.
(MIRA 17:6)

DERUM, Laymon Al'bertovich; KOSTINA, V., red.

[Diamonds came to the workshops] Almazy prishli v tsekh. Saratov, Saratovskoe knizhnoe izd-vo, 1964. 44 p.
(MIRA 17:10)
1. Glavnyy tekhnolog zavoda "Kommunist", gorod Marks (for Derum)

REZNICHENKO, F.I., red.; KOSTINA, V., red.

[Problems in the mechanization of construction] Voprosy mekhanizatsii stroitel'stva. Saratov, Privolzhskoe knizhnoe izd-vo, 1964. 129 p. (MIRA 18:5)

USSR/Cultivated Plants. Fruits. Berries. II

Abs Jour : Ref Zhur-Biol., No 15, 1958, 68366

Author : Kostina, V. A.
Inst : Scientific Research Institute of Viniculture and Wine Production. Novocherkassk Engineering and Amelioration Institute.
Title : The Characteristics of the Yearly Development Cycle of the Grapevine and of Ligneous Shrubs.

Orig Pub : Byul. nauchno-tekhn. inform. N.-i. in-ta vinogradarstva i vinodeliya, 1957, No 3, 36-40

Abstract : The Novocherkassk Engineering and Amelioration Institute conducted a comparative study of the yearly development cycles of 15-20 varieties of grapevine and of various ligneous shrubs (elm,

Card : 1/4

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USSR/Cultivated Plants. Fruits. Berries. II

Abs Jour : Ref Zhur-Biol., No 15, 1958, 68366

ash, blackthorn). The dates of the onset of vegetation, of budding, and of flowering were close to each other in the grapevine varieties which were investigated, with the exception of the European-Amur hybrids and the strains of various American species in which these phases begin earlier. The strains showed sharp differences in terms of the dates on which their berries ripened, on which the growth of the shoots was terminated, and on which the shoots began to mature. The dormant state characteristics were typical. All the various types of grapevine strains entered the period of their deep and organic dormancy at almost the same time (end of August or beginning of September), but they terminated this

Card : 2/4

SOKOLOV, Nikolay Mikhaylovich; KOSTINA, V., red.

[Spot welding of small-size parts] Tochechnaia svarka malogabaritnykh detalei. Saratov, Saratovskoe knizhnoe izd-vo, 1953. 118 p. (MIRA 17:5)

KUZNIK, Il'ya Abramovich, kand. geogr. nauk; KOSTINA, V., red.; LUKASHEVICH, V., tekhn. red.

[Hydraulic calculations in planning hydraulic structures in the Volga Valley]Gidrologicheskie raschety pri proektirovanii gidrotekhnicheskikh sooruzhenii v Povolzh'e. Saratov, Saratovskoe knizhnoe izd-vo, 1962. 30 p. (MIRA 15:11)
(Volga Valley--Hydraulic engineering--Tables, calculations, etc.)

NALIVKIN, Vladimir Alekseyevich; PROKOF'YEV, Ivan Iosifovich; PROTASOV, Boris Vasil'yevich; KOSTINA, V., red.; LUKASHEVICH, V., tekhn. red.

[Reconditioning parts by automatic building-up and welding] Vosstanovlenie detalei avtomaticheskoi naplavkoi i svarkoi. Saratov, Saratovskoe knizhnoe izd-vo, 1961. 85 p. (MIRA 15:7)

(Electric welding)

SOKOLOV, Nikolay Mikhaylovich; SHABLYGIN, Spartak Vasil'yevich; GARGALA, Vladimir Dmitriyevich; KOSTINA, V., red.

[Handbook for the electric welder] Spravochnik elektrosvarshchika. Saratov, Privolzhskoe knizhnoe izd-vo, 1964. 174 p. (MIRA 18:3)

MILOGRADOVA, Ye.I.; KHUDAYBERDYYEVA, R.N; KOSTINA, V.N.

Some data on the biotechnics of Chlorella cultivation in Uzbekistan. Uzb.biol. zhur. 6 no.4:39-41'62 (MIRA 16:7)

1. Institut botaniki AN UzSSR.
(UZBEKISTAN--ALGAE--CULTURES AND CULTURE MEDIA)

MILOGRADOVA, Ye.I.; HERDYKULOV, Kh.; KOSTINA, V.P.; KHUDAYBERDYYEVA, R.N.

Methods for mass cultivation of chlorella. Uzb. biol. zhur. 7 no.3:38-41 '63. (MIRA 16:9)

1. Institut botaniki AN UzSSR.